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AGRICULTURE

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PEOPLE'S REPUBLIC OF CHINA

I. GENERAL INFORMATION

SURVEY, APPRAISAL OF SURFACE WATER RESOURCES DISCUSSED

Hubei SHUILI SHUIDIAN JISHU [WATER CONSERVATION AND HYDROELECTRIC POWER TECHNOLOGY] in Chinese No 12, 20 Dec 81 pp 1, 53

[Article: "National Conference To Exchange Technical Experience in Surveying and Appraising Surface Water Resources Held in Wuhan"]

[Text] A national conference to exchange technical experience in surveying and appraising surface water resources was held in Wuhan city, Hubei Province, 20-28 October. This meeting was sponsored by the Hydrological Bureau of the Ministry of Water Conservancy commissioned by the Office of the National Agricultural Zoning Committee and the Water Resources Group. Delegates from the water conservancy (hydroelectric power) departments (bureaus) of the provinces, cities and autonomous regions, geological departments, river valley agencies, related schools, and scientific research and design units, totaling over 250 people, attended the conference. The conference received 167 papers and special topic reports.

Deputy Minister Chen Gengyi [7115 6342 0308] of the Water Conservancy Ministry delivered the opening remarks.

The mission of the conference was to exchange and summarize technical experience and some work experience in surveying and appraising surface water resources. The topics included: ground surface water, underground water, the relationship of ground surface water and underground water conversion, and water quality problems. Surveys and appraisal of water resources must answer four questions: first, how much water is available (including regional distribution, changes in time, quality standards, reliability); second, how much water is needed for socioeconomic development (present situation of water consumption of different types, near-term and long-range forecasts); third, what problems exist in the balance of supply and demand; fourth, what measures must be taken to solve existing problems in water resources. After 2 years of work, preliminary estimates show that the total average rainfall in our nation over many years is about 6 trillion cubic meters. The total average runoff in rivers over many years is 2.63 trillion cubic meters, including about 600 billion cubic meters of drainage of underground water from mountain and hilly regions. Separate calculations for the plains show that the comprehensive replenishment of underground water is 180 billion cubic meters. The total replenishment of underground water throughout the nation from the mountain regions and the plains is 780 billion cubic meters. Deducting the repeated

amount of conversion between surface water and underground water, the total national water resource is about 2.7 trillion cubic meters. According to survey data of each province, city and autonomous region compiled in 1978-1979, the total annual consumption of water throughout the nation reached 450 billion cubic meters. Of this, about 400 billion cubic meters were used for irrigation in agriculture.

Activities of the conference included the presentation of reports to the general meetings, exchange of experience in small meetings, discussion of special topics and discussion sections in groups. At the general conference, 27 delegates read papers or delivered special topic reports. New topics included a preliminary appraisal of national water quality, estimates of icy river resources of the nation, and estimates of lake and inland sea resources of the nation. After the conference, small discussion groups were organized to discuss five topics: rainfall and evaporation, runoff and replenishment, conversion of the three states of water, water quality surveys and appraisal, and underground water. In addition, discussion groups were set up for each river valley region under cooperative management to discuss and arrange future work.

Several major problems discussed at the meeting were as follows:

1. The method of mathematical statistics and analysis is the fundamental method to study the characteristic values of rainfall and runoff and the pattern of time and space distribution. The key to improving the precision of frequency calculations so that the results are stable and reliable is: reliability of data, consistency of data and adequacy of representation of the series. Therefore, special emphasis must be placed on analysis and examination of basic data and analysis and proof of the adequacy of representation of the series.

How to correct the representation of short series stations positioned over large areas requires further study in the future.

2. Runoff and replenishment are calculated in order to solve the problems in the consistency of the series of data. The methods of calculating replenishment used by various localities include itemized survey and estimation, the study of rainfall and runoff trends, the study of the relationship between rainfall and runoff, the study of the model of runoff genesis, and the method of calculating differences in evaporation. The group discussion of specific topics resulted in the conclusion that surveying and analysis must be combined, many methods must be used, analysis must be comprehensive, and selection must be rational. As to the years of replenishment, group discussion of specific topics led to the conclusion that they should be the years with available actually measured runoff data since liberation. Replenishment should be calculated according to the amount of water lost or gained that year resulting from the affects of water conservancy projects on the upper reaches of the station conducting the measurements. Before liberation, water consumption was minimal, and that amount could generally be neglected in replenishment.

The problem of replenishment of runoff in plains, whether the northern plains or the southern waterway network, whether embankment regions or lake regions, still presents difficulty at present. Some units have proposed starting out by studying

the evaporation of water surfaces and land surface evaporation to estimate replenishment. This is worth further exploration.

3. The isopleth graphs of rainfall, runoff and evaporation are a good method to study the patterns of the regional distribution of statistical parameters and the three elements in the balance of water resources, and to obtain the characteristic values of medium and small rivers which do not have available data. Drawing isopleth graphs requires not only that data gathered by a single station span a long period, and that the data are accurate, but also that the distribution of data is even and concurrent. It is difficult for these two conditions to exist simultaneously. Therefore, all data and concurrent data must be utilized to draw these two sets of isopleth graphs.

Topography affects the amount of rainfall. Yunnan and Guizhou Provinces have proposed the method of analyzing the relationship between altitude and rainfall. But the differences between the mountain regions are great, and one must be cautious when using this method.

In the northwestern interior, the high mountain regions and valleys of the Qinghai-Xizang and Yunnan-Guizhou Plateaus, the patterns of variation of the elements in the balance of water, rainfall, evaporation and runoff and the patterns of variation of the elements in the vertical climatic zones are distinct. We should pay attention to analyzing the effect of such factors as the altitude of the topography and the replenishment by melting ice and snow upon the elements in the balance of water.

The key to calculating evaporation is the accuracy of the data and the coefficient of conversion. Our nation's instruments for measuring evaporation are not uniform. At present, data on the conversion of large bodies of water are scarce. Everyone believes it is still better to first convert the data to the E_{601} type.

4. Appraisal of underground water resources can be accomplished by using the average measurement of the amount of water in plains to calculate the amount of replenishment. In ordinary mountain regions where the river valleys are closed and where subterranean flow is not large, separate calculations of underground runoff can be used. The results of appraisal by each region can be checked using the principle of balance of water quantities.

The correctness of the estimates of the various quantities of replenishment is determined by the basic amount of water available and such parameters as the amount of rainfall and the amount of water used for irrigation. The various hydrological and hydrogeological parameters such as the degree of water supply and the infiltration and replenishment coefficients must be selected according to the results of experiment and research at the locality.

To satisfy the demands of agricultural zoning, zoning for water conservancy and zoning of river valleys, the appraisal of underground water resources should be carried out according to natural units and hydrogeological units, and the results should be summarized for each river valley. Besides appraising the average amount of water over many years, we must also appraise the amount of water available under different percentages of guaranteed water supply.

5. Surface water and underground water alternate. Calculating them separately and appraising them separately are not only repetitious but also conflicting. To carry out an overall appraisal of water resources, we must study the alternating relationship among rainfall, surface water and underground water. In regions where underground water is exploited and utilized on a large scale, we must understand the amount of replenishment of underground water, and we must also understand the possible amount of reduction of ground surface water after massive extraction of underground water. The hydrogeological conditions in karst regions are complex. We should select a closed river valley for study and estimate the amounts of underground water and ground surface water simultaneously.

6. In surveying and appraising the quality of ground surface water, the criteria for appraisal are established by selecting the parameters according to the different uses of the water resources, requirements for water quality and the present situation in monitoring water quality in our nation. The method of appraisal presently used is simple and practical. Appraisal of large rivers, lakes and reservoirs using the average values of sections cannot reflect the true situation of pollution of the water quality. Pollution zones should be drawn up for appraisal.

The key problem in water quality appraisal is the quantity and quality of monitored data. The experience of combining the compilation of water quality data and water quality appraisal by the Hui River Committee and Shandong Province is worth popularizing.

Water quality and the quantity of water should be combined for appraisal so that the results are more rational.

7. The problem of water resources is often closely related to the uneven regional distribution of water resources and the variations within the year and between years. We should study the uneven distribution of water and soil resources, seasonal drought and floods, the alternating occurrence of years of continuous drought and floods, and we should analyze the problems that may occur as a result of industrial and agricultural production and problems in exploitation and utilization of water resources.

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CSO: 4007/199

NEW DEVELOPMENTS IN HOG RAISING DISCUSSED

Hog Raising Under the New Conditions

Beijing ZHONGGUO NONGMIN BAO in Chinese 7 Feb 82 p 2

[Article by Su Feng [5685 6912], first secretary of the Tangshan Prefecture Chinese Communist Party Committee: "Developing Hog Raising Enterprises Under the New Conditions"]

[Text] The development of hog raising enterprises is a major topic which now concerns the peasants and the rural basic level cadres. I recently paid visits to Leting, Lulong, Qianan and other counties, communes and brigades to research this report, which presents some new conditions and issues for your study and investigation.

1. In the past, hog raising conditions in Tangshan Prefecture were relatively good. This was because at that time the method of "three hogs equals one laborer" was then in effect, and hog raising had predictable advantages. Take Leting County for example. Previously, when a 200 jin fat hog is sold to the state, the state will give 200 jin of feed grains, and in addition the work brigade would also give 33 work points for hog raising and about 28 points for manure collection, and also provide food grains at a price comparable to the state grain price. Income from the sale of one hog, with expenses deducted, came to about 87 yuan. The profit from three hogs figured out to the approximate equivalent of the income from one laborer. Therefore, commune members were at that time very much interested in hog raising. Statistics show that from January through September of 1981, the number of hogs that were raised was up 5 percent and the number in inventory was 2.6 percent higher than the same period in 1980.

2. The current tendency of a decline in hog production requires attention. Nonetheless, it must be observed that there is an increase in household hog raising. Because of certain adjustments which were made in carrying out the "dual contract" system and in hog raising policy there has been a decline in hog raising endeavors. We offer the following analysis. First, after pursuing the "dual contract" resonsibility system it became difficult to sustain collective hog raising. For example, in Lulong and Qianan counties, collective hog raising was reduced by 28,074 head. Second, in the past there was a relatively small ratio of hog raising by staff and worker dependents or by local households without contracts or with few contracts. Now, work points

for hog raising and for manure [illegible] have been abolished, and there no longer is award sales of feed grain, so that raising one hog, deducting the expenses and investment, averages a profit of less than 10 yuan. They feel that such hog raising is "needless bother" and are unwilling to undertake it. For example, in 1980, the Qianan mining district cart-shaft brigade raised 1,000 hogs, mostly by the staff and worker dependents. This has now been reduced to 600 hogs. Third, there is an increase in the number of commune members raising hogs. The more we institute the responsibility system of linking remuneration to sales the more the commune members are willing to raise hogs and accumulate fertilizer. For example, in Qianan and Lulong counties the number of hogs raised by commune members is 31,214 head higher than in the past. Although the commune members are somewhat disgruntled about the decrease in state grain for hog raising, nonetheless as long as the improvements in hog raising policy are continually being made and when propaganda work has fully promoted hog raising, there then will be no major decreases in hog production.

3. The current problems in hog purchases do not stem from a shortage of hogs but rather are mainly caused by butchering and selling by individuals. In Leting, for example, prior to the Spring Festival, 150 jin and over hogs removed from inventory had reached 38,077 head, 3,563 more than at the same time in 1980. Why did the period of 1 October through 15 September of 1981 show throughout the whole district a 20 percent decline in daily purchase quantities compared to the pre-September period? The primary reason was an obvious increase in butchering and selling by individual commune members and increased slaughter by rural butchers. According to statistics from the Leting food products company prior to October 1981 the sale of a 200 jin grass-weight class-two hogs to the state produced revenues of 144.70 yuan. Yet, individual revenues were only about 5 yuan greater than from selling to the state, so there was considerably less individual butchering and selling. After October 1981, there was an additional 3 percent of both purchase tax and sales tax and the food company selling price increased 5 fen per jin, with a 5 fen per jin increase in the price of individually butchered and sold pork. Calculated together, individual butchering and selling of a gross-weight 200-jin hog [illegible] about 17 yuan more than state purchase of that hog. This was a great stimulus to individual butchering and selling. According to statistics dating from 5 December 1981 for the five major collective markets in Qianan County, food company sales amounted to only 21 percent of the total sale while individual butchering and selling accounted for 79 percent.

4. Following the development of the new conditions there must be continual improvement in certain concrete policies. Based on the principle of the triple consideration of state, collective and individual combines with the actual conditions in these areas, the study of a few possible methods must be done so as to mobilize peasant enthusiasm for hog raising and to guarantee the fulfillment of the purchasing tasks. For example, to guide and encourage commune members to properly manage their private plots so to provide the feed grain necessary for raising hogs, which will develop household hog raising and broaden the hog resources. By signing contracts of assigned procurement, we can promote the fulfillment of the purchase plan. We must not check individual butchering and sales, but we can only permit them under the premise of fulfilling the task of state purchases and collecting adequate tax receipts.

brigades which are carrying out their responsibilities should institute the methods by which the base for fertilizer investment is established and the adjustment of the deficiencies and surplus can be carried out, as this will solve the problem of fertilizer accumulation for those staff and worker families which raise hogs. We must strengthen market management to put an end to the problem of tax avoidance and tax theft by meat markets. We should also point out that hogs classified as lean meat also show the greatest weight gains after reaching 150 jin, and not providing additional award sales of grain for hogs over 131 jin is not beneficial for the development of the lean meat class of hogs. These problems require further study and investigation in the process of implementation in order to promote hog raising development in our area.

Hog Raising Directive Implemented

Beijing ZHONGGUO NONGMIN BAO in Chinese 7 Feb 82 p 2

[Article: "Four Provinces Thoroughly Implement the State Council Hog Raising Directive"]

[Text] After the State Council sent down the directive on hog raising many provinces, municipalities and autonomous areas implemented it with stepped-up activities. Some provinces have already taken effective measures which have begun to produce results.

In Guizhou Province, in addition to insisting on the original state and collective award sales policy, a regulation was passed stipulating that for each fat hog there would be an allocation of one portion of foraging ground, two portions for each sow, an additional 60 jin of state award sales of grain for each sow and 5 jin for each live piglet born. For each three head of fat hogs turned over to the state by commune members, each household is allocated 500 jin of feed grain by the state.

Zhejiang Province requested that "dual contract" production teams assign both the feed grains and foraging grounds as well as the responsibility for the sale of live hogs either to the households or else keep the feed grain as a unit and award it to the families who sell hogs to the state. For both collectives and individuals, for each fat hog sold to the state there is an additional bonus of 10 industrial goods coupons for commodity items that are in critical demand such as bicycles and sewing machines. A system of assigned hog raising was instituted, implemented by either pig farms or households which raised pigs.

The Hubei Provincial Party Committee decided that each year it would exchange 10,000 dun of urea for oil cakes to make compound feed and improve the feed grain remuneration. For each jin of the gross weight in excess of the portions sold there is a bonus of one jin of unprocessed food grains.

In Hunan Province the September 1981 figure for live hogs in inventory shows a 10 percent decrease compared to that of the same period in 1980. Consequently, the provincial party committee issued a document strongly urging the departments concerned to become closely involved. According to yearend statistics from six prefectures including Anyang, the decline rate of the live hogs in inventory was stabilized at about 0.5 percent.

[1982

CSO: 4007/231

MANAGEMENT PROBLEMS IN ANIMAL HUSBANDRY DETAILED

Beijing NONGYE JINGJI WENTI [PROBLEMS OF AGRICULTURAL ECONOMICS] in Chinese
No 12, 23 Dec 81 pp 19 - 23

[Article: "Summary of the Third National Conference on Economic Theories of Animal Husbandry (Part II). Part I published in JPRS 80042, 5 February 1982, No 188 of this series, pp 16 - 23]

[Text] III Production and Circulation Problems

Today a pile of problems exists in the circulation field. There is still quite a bit of leftist rigamarole around, and things that go against objective laws are also fairly numerous. These problems have hurt production and consumption, and unless they are promptly settled, there will be a great deal of future trouble. As some leadership comrades in the Central Committee have said, a bumper harvest can turn into a bumper disaster.

Sufficient serious attention must be directed to the position and role of commodity circulation of livestock products, both viewing seriously and studying production, and viewing seriously and studying circulation. A large body of facts has demonstrated that sole attention to production and no attention to circulation makes it difficult to do a good job in production, and often, because circulation exerts a drag on production, the more hurry the less speed.

Everyone is aware that an extremely important problem in the commodity circulation of livestock products is how to arrive at a correct price for livestock product..

Comrades have said that following the Third Plenary Session [of the 11th Party Central Committee], when the state made planned increases in procurement prices paid for some livestock products and shortened the price scissors, the peasants derived material benefits, which raised their enthusiasm for livestock production and advanced development of livestock industry production to bring about a preliminary change in the situation of shortage in commodity in circulation of livestock products.

However, some problems still remain in prices of livestock products today.
1. Some prices for livestock products continue overly low, as is the case with beef. for example. For a long time the state has set procurement prices

paid for beef on a general standard for old and decrepit cattle, the procurement price averaging 0.40 yuan per shijin, which is lower by more than 30 percent than the average actual feeding cost of 0.60 yuan. In some parts of Nei Monggol, sale of a beef animal of about 500 jin live weight entails a loss of more than 200 yuan, and a similar situation exists in the case of other domestic animal and poultry products such as cowhide and honey. 2. Price parities between industrial and livestock products are not fair. For example, a milking machine costs more than 3,000 yuan, meaning that herdsmen would have to sell between 70 and 80 head of cattle to be able to buy one. For a shearing machine, herdsmen would have to sell between 650 and 700 head of sheep. Procurement price paid for a cowhide averages about 20 yuan, and between four and five pairs of boo s can be made from the hide. Figuring a value of 40 yuan per pair, their to. l value would be 160 to 200 yuan, a four to five fold difference in cost price of raw material. Herdsmen in Xinjiang say, "it is better to ride a cow than to wear a pair of boots." 3. Parity prices among farm and livestock goods and among livestock goods are not fair. The price for superfine Xinjiang wool is 16 percent lower than the price for long cotton. In Nei Monggol, the procurement prices paid for fine wool and semi-fine wool are identical, but only about 5 kilograms per year of fine wool is obtained from a fine wool sheep, while only about 2.5 kilograms per year of semi-fine wool is obtained from a semi-fine wool sheep; thus the income from raising one semi-fine wool sheep is between 5 and 10 yuan less than from raising one fine wool sheep. Consequently, the masses and production units do not want to raise semi-fine wool sheep, so development of semi-fine wool sheep is slow and unable to satisfy national needs. Every year more than 5,000 tons of semi-fine wool has to be imported at a cost in foreign exchange of more than $20 million. 4. The practice still exists whereby quality is deprecated in order to force down the price to be paid, whereby dressed weight is estimated by looking at animals, and whereby grade of meat is lowered in order to lower price to be paid. State Council document number 26 issued in 1979 clearly stated that when buying cattle, "each head must be weighed, and a price set on the basis of quality, with no forcing down of grade in order to lower the price to be paid, and no looking at herds and estimating a price to be paid." However, as of today this problem still has not been solved.

In some places, the masses are very dissatisfied about the difficulties in selling hogs, and this subject has become a major topics for discussion by party representative assemblies and people's representative assemblies. Live hog production has become a burden. What is the reason for difficulties in selling hogs? One view holds that the essence of the difficulty in selling hogs lies in overproduction of commodity hogs, that is to say that production of commodity hogs has exceeded ability to pay for commodity hogs. Another viewpoint holds that low purchasing power is a factor causing difficulties in selling hogs, but the essence of the problem is circulation. Everyone put forward the following several suggestions.

1. Need to change the system of independent families doing business. The comrades believed that the livestock industry is funadmentally commodity production requiring full play of the role of price laws with some competition. Currently the commercial system whereby individual families do business is not compatible with commodity production, and restructuring should be done.

First, it is necessary to have collective businesses and individual businesses in addition to state-owned businesses. Second, it is necessary to permit livestock industry production units to engage in integrated production and marketing enterprises. Third, it is necessary to establish a main livestock industry company with a combining of production and marketing in the livestock industry from the central to the regional level, each jurisdiction also establishing corresponding bodies for the unified management of production and marketing in the livestock industry. Some comrades feel that this way of doing things offers five main advantages. 1. Unified leadership that helps closely coordinate production and marketing so that producers will be able to unify ownership of and rights of use of means of production, and allocation rights for products, and so that circulation will help advance development of production. 2. Reduction in the number of intermediate links, reduction of expenditures and waste, lowering of cost, and promotion of consumption. 3. Overcoming the wrangling over farm and livestock quarantines, and an early elimination of epidemics. 4. Equitable use of state funds to support production. 5. Solution to the problem of overlapping organizations for a conservation of manpower.

2. It is necessary to proceed from commodity production and break up the strict delineation of areas, permitting a mutual distribution and a mutual circulation between haves and have nots of livestock products among prefectures, among provinces, and among different systems of ownership. State planned regulation would be better, and where state regulation is difficult, automatic redistribution among prefectures, provinces, and among the people should be permitted with no delineation of territories or stifling controls.

3. Prices for livestock products should also proceed from the characteristics of commodity production of livestock products, with overall consideration given to the requirements of the laws of value. It is necessary, first of all, to readjust unfair elements in existing prices, the readjustment being both upward and downward. For example, prices for encouragement of the raising of hogs should be lowered, while prices for beef cattle and lean hogs should be appropriately raised. A lot of shouting has been done for many years about unfair parities, but now the time has come when solution has to be found. While looking on and doing nothing about the unfairness of parity prices, production is impaired, so how can we go on without finding a solution? Additionally, once readjustment has been made, prices should be gradually allowed to float. Within the upper and lower limits of floating prices uniformly set by the state, business units can allow fluctuations within prescribed limits on the basis of the relationship between supply and demand for livestock products. This would make things more and more lively and situations would be avoided in which people let meat products rot or go bad rather than lower the price, cutting off their own noses to spite their faces. This would help both production and consumption.

4. Change of the bureaucratic workstyle in business with practice of a system of responsibility in business.

5. Intensification of the building of communications and transportation. Everyone agrees that communications and transportation should be put ahead of

everything else. Many farm and livestock products or local specialties are produced in the farflung rural villages or in pastoral areas along the frontiers or in mountain regions, and because of poor transportation in some regions, products cannot be moved out. Large quantities accumulate, and this neither helps production nor consumption. Consequently, it is necessary to intensify the building of communications and transportation. If this is not done, these regions will vigorously develop livestock industry production only to be limited by communications and transportation, and the more they hurry the less their speed. Last year's discussion meeting raised this problem, and it was raised again this year. That this has been so demonstrates its importance.

IV. The Problem of Integration of Animal Husbandry, Industry, and Commerce

Countless facts show that unless China's livestock industry as well as (or even to a greater extent than) its farming industry changes its position of solely being a supplier of raw materials, and unless it breaks through the situation of serious split among agriculture, industry, and commerce, any fundamental change in prospects will be difficult. This is because price parities in the exchange of industrial and agricultural products are currently unfair. In addition, expenditures for the circulation of commodity livestock products are too great, making it too uneconomical for them to serve as consumption foods for the people. Since the Third Plenary Session of the 11th Party Central Committee, by following the guiding mentality of primary reliance on science in development of the farming and livestock industries, China's farming and livestock industries have gained a new vitality. However, the seriousness of use of economic methods to deprive peasants and herdsmen has not fundamentally changed, and this is also a fact that cannot be denied. this has been particularly true in the livestock industry. The commodity rate in livestock industry production is fairly large. In agricultural areas around 80 to 90 percent is commodities, and though personal consumption is somewhat greater in pastoral areas, the commodity rate is still very high, so the significance of the integration of animal husbandry, industry, and commerce is greater and benefits more remarkable. However, the reality today happens to be just the reverse, making experimentation very difficult and action more difficult. Almost all of the commodity livestock products are now in the hands of state-owned industries and businesses, so as soon as an integration of animal husbandry, industry, and commerce occurs, that will mean a fight for raw materials or a "shoving to get something to eat" against state owned industries and businesses. Commercial departments say this is "snatching away their rice bowls," and peasants and herdsmen say this is resisting the use of economic methods to deprive peasants and herdsmen, so just who is right? This requires a look at what methods can promote production, make the economy prosper, and serve the people's consumption endeavors. Without doubt, benefits from an integration of animal husbandry, industry, and commerce would be good.

Following several years of pilot projects and explorations, there is a renewed awareness that further pilot projects and practice in the ins and outs of this newly born matter of integrated animal husbandry, industrial, and commercial enterprises is fully necessary. Consequently, comrades attending the

conference spoke glowingly of their necessity, their possibility, and the basic lessons of their experience.

(1.) China's goal in the integration of animal husbandry, industry, and commerce lies in changing the position of the livestock industry as a supplier of raw materials, to reduce the number of links in the circulation of livestock products, to conserve on circulation expenses, and to go on to eliminate various obstacles in the way of development of livestock industry production, arousing the enthusiasm for production of herdsmen, and making development of commodity livestock products commensurate with the pace of the building of the "four modernizations."

(2.) The mission of the farming and livestock industries is a steady wresting from nature of food and wealth to provide steadily increasing amounts of consumption goods for society. It is their end products that manifest their effectiveness in serving society, and their fundamental role in the national economy. These benefits and fundamental roles are the results of the common function of the three sectors of agriculture (including animal husbandry), industry, and commerce. They are mutually cooperative, mutually towing, mutually advancing, and mutually restrictive. Should this organic relationship suddenly be damaged or destroyed, the bonds of mutual cooperation being torn asunder, commodity production of livestock and farm products is bound to be impaired, or even decline and perish. The best way in which to maintain these bonds intact is to integrate animal husbandry, industry, and commerce.

(3.) For historical reasons, the situation of the price of farm and livestock products in China being at variance with their value has been very serious right up to the present day. The value of the labor used to produce farm and livestock products has not been able to be truly realized. This state of affairs has meant that numerous farm and livestock industry capital construction projects have frequently not made up the losses sustained in their construction. This was because what went into them was high priced industrial goods, but what they produced was low priced agricultural products. Development of integrated livestock, industrial, and commercial enterprises, and taking the path of the integration of animal husbandry, industry, and commerce would be that profits realized from sales and processing of commodity farm and livestock products would revert to the farming and livestock industry. This is not only right and proper, but is also workable in practice.

(4.) In operating integrated livestock, industrial, and commercial enterprises, it is essential that their superiority in quantity, quality, and economic effectiveness be shown to be incomparably greater than that of the previous industrial and commercial channels, otherwise they will lose their reason for being.

(5.) In both experimenting with and developing integration of animal husbandry, industry, and commerce, the main things must be commodity rates and quantity of commodities. In which ever way the commodity economy is more developed, it is in that way that integrated enterprises must inevitably have the greatest possibilities.

(6.) The integration of some livestock products will have to be done on a certain scale. When a unit's or a region's livestock products do not suffice for highly efficient, low expenditure economic benefits, commune and brigade, or county and prefecture lines will have to be broken through to set up integrated enterprises that are larger in scope. This may be done through production and marketing contracts, returns of profits to producers, or joint share operation.

(7.) The relationship of specialization and socialization to the integration of animal husbandry, industry, and commerce is mutually supportive and mutually advancing. Certainly the integration of animal husbandry, industry, and commerce is a result of and a product of specialization and socialization, it is, at the same time, also specialization itself. In places in which the degree of specialization and socialization is not high, operation of integrated animal husbandry, industrial, and commercial enterprises can promote increase in the degree of specialization and socialization. Once specialized contracting systems of responsibility and systems of responsibility linking output to calculation of remuneration have developed, some places will be able to make households specializing in the livestock raising industry a part of their integrated animal husbandry, industrial, and commercial enterprises.

(8.) Going in for grandiose projects and unnecessary frills is to be guarded against. The make-up of integrated enterprises has to be planned. Generally speaking, one thing should be done at a time, and when the situation is ripe for something, experiments should be run for that thing. When the situation does not permit "a coherent whole," then a "semi-coherent whole" will do (i.e. partial integration, with the integration of front parts or back parts).

Current difficulties in pilot projects for and developmnnt of integrated animal husbandry, industrial, and commercial enterprises. The opposition of some comrades in the commercial and public finance sectors is extraordinarily severe, and in most areas, public finance and commercial administrative sector sectors are not very positive about formation of "a coherent whole" in animal husbandry (farming), industry, and commerce. Some place the financial standpoint and the production standpoint in opposition to each other, believing that it is a "transfer of profits." Some are accustomed to doing business through the old channels, "using a knife to cut when there are too many, and using the lash to urge along when there are too few." They are neither good at using their own individual methods to link cities and countryside for the development of rural and pastoral sources of wealth, or seeking "ways to generate wealth," or "ways to amass wealth," and neither do they like allowing others to do any dealing. Some fear only that someone may snatch away their ricebowl, without realizing that when other people's ricebowls are carried away, there will also be those who go hungry. Therefore they "do not hesitate to kill the chicken to get its eggs," or "drain the pond to get the fish," and they are not willing, in the face of a new situation, to dynamically pioneer anew opportunities for themselves. Some of them take every opportunity to represent themselves as maintaining the welfare of the whole, and wherever the face of the welfare of the whole appears, it seems that only they represent the welfare of the whole. The so-called theory of transfer of profits," "theory of using the little to squeeze and out the big" and the "theory of using the indigenous to squeeze out the foreign" all stem from this.

In this connection, comrades attending the conference made the following suggestions about progarms and policies for integrated animal husbandry, industrial, and commercial enterprises.

First is to give to already designated pilot project units genuine rights to experiment. Second is that pilot project areas should be enlarged. All provinces should set up pilot project experiments for both pestoral areas and farming areas. Third, livestock products are second and third category commodities for which there should be no further practice of the method of "procuring however much is available." Second category products are to be part of the planned economy and should "be guaranteed without change for several years." Third category products are to be regulated by the market. Fourth, legislation should be passed pertaining to integrated animal husbandry, industrial, and commercial enterprises. Fifth, it was recommended that the State Council or appropriate departments affiliated with the Ministry of Agriculture should convene, at an appropriate time, a work conference on industry and commerce to study and formulate programs and policies, and to decide plans for pilot projects.

V. The Longrange Planning Problem

Delegates further explorted the importance and position of the livestock industry and formulated a foundation, goals, and basic content of longrange plans. They also stipulated that plans must proceed from the situation existing in China and be in accordance with existing capabilities. On the basis of the seeking of truth in facts and concern for economic results, emphasis was given discussion of several tactical problems of development in longrange plans for the livestock industry. These were as follows:

1. Strategy for Technical Development

Just what strategy should be practiced in the technical development of China's animal husbandry? Would it be proper to adopt traditional development strategies using the United States and the Japan of today as the developmental goals that technical development of China's livestock industry should imitate, taking the road of high investment of capital, high structuring, high possession, high energy consumption, and high output value. Would this result in high benefits? What development strategy should be adopted in view of China's national situation? Currently there are three views.

One, based on a survey of large Beijing chicken farms, holds that Beijing's several chicken farms are large in size, have great output, and profits approaching 1 million yuan; therefore, henceforth, there should be continued development of large scale mechanized and factorized raising of chickens and hogs.

A second holds that the indigenous and the foreign should be practiced at the same time, that the large, the medium, and the small should be developed simultaneously, and that a program of mechanization, semi-mechanization, and hand operation should be employed at the same time.

The third view holds that in its use of superior varieties, importation of Peruvian fish meal and Japanese ammonium nitrate to produce full value livestock feeds, and in its invitations to experts and professors in institutions of higher learning to give technical guidance, Beijing possesses material and technical advantages such as other provinces and municipalities in the country are unable to match. Therefore, the several large chicken farms in Beijing showed profits while most of the country's mechanized and semi-mechanized chicken farms were in dire straits. The livestock industry is part of the commodity economy in which use of any technical measures requires adherence to the principle of final products, and the kind of economic results as standards for judgment. These also establish estimatively the critical points and the optimums for technological investment. Therefore, advantage should now be taken of a plentiful workforce and the low value of labor to put efforts into biological technology requiring relatively small investment (superior varieties, building of grassy plains, grassy mountains, and grassy slopes, and the processing and production of balanced cattle feeds).

2. Strategy for Economic Development

The long enduring practice of the past whereby an economy owned by all the people was the only legal economic form, the collective economy was a traditional economic form, and the individual economy was a remnant of capitalism, with the adoption of measures restricting or prohibiting commune members in the raising of poultry and livestock was wrong. Henceforth, a livestock industry economy that is diversified in form should be developed; however, three different academic points of view exist as to how it should be developed.

One advocates a "primary and secondary theory," and opposes combinatorial theory, believing that public raising and private raising should be practiced simultaneously in a program whereby public raising is primary in order to strengthen the collective economy. In a socialist country such as ours with its system of ownership founded on production teams in people's communes, this method is more suited to levels of production, and there is need to guard against vacillation on both [the public and private] sides.

The second advocates systems theory and combinatorial theory, but disagrees with reticulation theory [4854 4158 6158], primary and secondary theory, substitution theory, and arbitrary uniformity. The primary and secondary theory viewpoint does not square with objective realities. Except for the numbers of cattle now being raised in pastoral areas, in terms of the country as a whole, the overwhelming source of livestock products is individual livestock raising, and the portion raised publicly has never held a "primary" position. Inference on the basis of the "primary and secondary theory" can lead to the conclusion that large amounts of manpower and financial resources should now be used to develop the public cattle raising portion until it accounts for more than half of all cattle raising. Deduction from "primary and secondary theory" places in mutual contradictory positions CCP Central Committee Document 13's decisions on "All Matters Suitable for Individual Commune Member Operation Should Be Done to the Maximum Extent Possible by Peasant Households," and the thesis of the Central Committee that China's is a socialist commodity economy with a diversified ownership structure in which

public ownership predominates. Application of the viewpoint of systems theory means that the livestock industry is a system of economic control composed of the breeding system, the livestock feeding system, the quarantine system, and the procurement, storage and transportation system, and is not limited to some direct cattle raising units. Proceeding from China's current levels of productivity, even though fairly good economic results have admittedly derived from the individual and collective livestock raising industries, the economy of ownership by all the people has greater advantages in breeding, livestock feeding, quarantine, procurement, and storage and transportation. In these fields the state-owned economy should actively develop, and this development should provide active support to the individual and collective livestock feeding industries. On the basis of help to them in achieving increased output and increased earnings, all of most livestock products should be made a part of planned markets. Therefore, it is necessary to devise overall strategies for the animal husbandry economy as a whole. Assessment should not be made solely on the basis of quantity of livestock raising being done to determine who is primary and who is secondary, but rather on the principle of cooperative specialization. On the basis of the strengths and weaknesses of various economic systems and requirements in development of the objective system, making the most of advantages and downplaying of disadvantages, and an equitable division of labor should be done to bring their production potential fully into play and create greater social material wealth to achieve a balance between the haves and the have nots, each being properly provided for. In this way both the structure and the organization are made equitable, and the superior position of the system of public ownership continues to be maintained. All that is required for state and collectively owned livestock farms is a restructuring of their methods of operation to derive better macro-economic results, and they too will be able to attain the development they should have. At the present time when there is a seller's market for most livestock products, no problems at all exist in a possible overwhelming of the state-owned and collective economy by the commune member livestock raising industry. Proceeding from this viewpoint, there should be gradual change in the different policies towards the state-owned the collective, and the individual economy in procurement prices paid and award sales standards for livestock products, all being treated equally without discrimination.

3. Strategies for Livestock Fodder Development and Use

China's strategy for development of livestock fodder should be as follows: To make full use of the abundant workforce, and use every possible means to use resources that have not yet been used to hasten the building of grasslands in pastoral areas, to develop grass covered mountains and slopes in farming areas, and to go in big for comprehensive use of agricultural sideline products to solve the problem of insufficient grass and fodder for livestock.

4. Establishment of an Integrated Economic Management System With Entrepreneural Administration That Is Both Able to Enliven the Micro-economy and Able to Strengthen Macro-planning and Management

Analysis using cybernetic theory shows the existing system of management to be an administratively centralized cybernetic system that uses administrative methods to control the economy. Within the system, departments stand independent of each other, one area is separated from another, suppliers,

producers, and marketers have no face to face dealings with each other, manpower, finances, and materials are individually managed, and individual components frequently shift their problems to others. Territories are strictly staked out, and there is frequently ceasless wrangling and interminable conflicts. In performance of work there is neither dynamism or restraint. The system can neither vigorously support peasants and herdsmen in development of production to enliven the micro-economy, nor is it able to vigorously strengthen planning and management in the macro-economy. As the economy of the livestock economy develops and diversified economic forms appear, the unsuitability of this system becomes more and more apparent. Everyone believes that longrange plans should include the issue of system reform.

Some delegates put forward the idea of an integrated economic management system that is graduated, has numerous steps, and is entreprenurially administered. They proposed a gradual change in livestock administrative organizations below the provincial and municipal levels to an entreprenural livestock company uniformly organizing within the company on the systems theory concept all breeding, livestock feed, veterinary medicine, procurement, storage and hauling, sales, funds, and materials units using the principles of contract administration and specialized cooperation for the integration of supply, production, and marketing, and of manpower, finances, and materials. Within the company, a system of hirings would supplant the appointment system, and fluctuating wages would replace fixed wages. An election system would take the place of the life tenure system; a system of responsibility would replace the eating out of a large common pot, and sole financial responsibiligy would take the place of uniform receipts and uniform expenditures.

5. Systematic and Scientific Development Strategy for Information, Consultation and Decision Making

Levels of development of China's livestock industry economy are fairly low and mistakes have been many. Though much has been invested, there has been considerable waste. One of the reasons has been no establishment of a scientific news, consultation, and decision-making system, which has resulted in mistakes on numerous occassions, and payment of substantial "study expenses."

(1) Establishment of a self-contained, accurate, information system. (2) Establishment of a consultation system that includes technology and economics. (3) Establishment of a system of responsibility for decision making. Leaders must make prudent decisions about major projects on the basis of collective study; decision makers must bear economic consequences for their decisions (bearing legal consequences for major mistakes); and they should enjoy economic benefits from correct decision-making.

6. Strengthening of Livestock Economy Research, and Doing a Good Job of Building Science and of Education.

Research on the livestock economy is gradually becoming more penetrating. Academically, discussions at this conference on five special topics were on a higher plane than last year, and numerous new situations and new problems

requiring study were put forward. Additionally, numerous new sciences have begun to be introduced into studies, sciences such as macro-economics, micro-economics, eco-economics, systems engineering, and futurology.

Nevertheless, livestock economy studies have also shown themselves to be out of touch with requirements of situations, and henceforth the task should be to further systematize and make more scientific studies of the livestock industry economy, establishing as soon as possible a self-contained and independent branch of learning for livestock industry economics.

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ANHUI STATE FARMS IMPROVE ADMINISTRATION, READJUST ECONOMIC STRUCTURE

Beijing ZHONGGUO NONGMIN BAO in Chinese 11 Feb 82 p 1

[Article by Wang Peiyi [3076 1014 3015]: "Anhui State Farm and Land Reclamation System Turned Losses into Profits in 1981 Through Improvement in Administration and Management and Readjustment of Economic Structure"]

[Text] The Anhui state farm and land reclamation system, which has showed losses for the past more than 30 years, improved its administration and management in 1981 and readjusted its economic structure to make a profit of 5 million yuan.

In 1979, this province's state farm and land reclamation system converted losses into profits for the first time; however, as a result of serious flood disasters the following year, it again ran losses of more than 13 million yuan. In 1981, leaders of the provincial state farm and land reclamation system assiduously summarized the lessons of historical experience and took firmly in hand a restructuring of administration and management and economic readjustment work centered around a system of responsibility for production. The 348 agricultural production teams throughout the system set up systems of responsibility, whose main ingredients were "contracting, fixed outputs, and awards," which strengthened the sense of being masters in their own house among the farms' employees, and readjusted the economic structure within the state farm and land reclamation system. They also put to full use the abundant natural resources of barren mountains, wastelands along bodies of water, lakes, reservoirs, ditches, and ponds in vigorous development of economic diversification. Now their diversification involves 94 different items, which have increased their earnings and laid a foundation for development of integrated agricultural, industrial, and commerical enterprises.

The Anhui state farm and land reclamation system plans next year to set up nine more integrated enterprises on the foundation of eight existing agricultural, industrial, and commercial integrated enterprises; and, prior to 1983, it intends that the state-owned farms throughout the province will little by little become a part of or operate integrated enterprises, expand integration with rural communes and brigades, and build state farms with all possible speed into burgeoining enterprises with all-around development of farming, forestry, livestock raising, sideline occupations, and fisheries that carry on integrated agricultural, industrial, and commercial activities.

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BRIEFS

LISTS OF ACHIEVEMENTS--1. The province had an overall bumper harvest. The income and savings deposits of commune members broke through the highest historical levels. 2. In Huadong Prefecture, connecting tracks were laid on the important Anhui-Jiangxi railroad trunk line. 3. Big achievements were made in the construction of the Two Huai (Huainan and Huaibei) coal base. The Liuqiao coal mine, with a designed annual production capacity of 600,000 tons of coal, was completed and put into operation; the Luling coal mine, with the capacity to dress 1.8 tons of raw coal a year was completed and put into trial operation; and in the Zhunbei powerplant of the Kengkou power station, a 200,000-kilowatt generator was integrated with the power network and is producing electricity. 4. In 1981, the volume of direct export commodities reached $86 million, an increase of 1.15 times over that of the previous year and an increase of 3.5 times over than of 1979. 5. The China Sciences and Technology University basically completed the predevelopment and manufacture of the physical design and key parts for the Hefei synchronous radiation unit. [Text] [Harbin HEILONGJIANG RIBAO in Chinese 13 Feb 82 p 4] 9727

CSO: 4007/249

REPORTER CALLS ATTENTION TO SUGARBEET WASTE IN HEILONGJIANG

Beijing GUANGMING RIBAO in Chinese 5 Feb 82 p 2

[Letter from staff reporter Zheng Xiaofeng [6774 4562 2800]: "The Alarming Waste of Sugarbeet Resources Should Be Stopped Immediately"]

[Text] Editorial Department:

Recently I went to the main sugarbeet-producing region of Heilongjiang Province to cover a story and saw that, in a year of great natural disasters, a bumper harvest had been reaped from the large area planted with sugarbeets and that the total output had reached the level of the high yield of the year before last.

The party's policies had promoted a high yield in agriculture, but some of our departments had artificially caused a great amount of waste in what had been harvested and was on hand. The purchasing station in Anda County, based on its self-determined "purchasing standard," compelled the peasants who were selling sugarbeets to pare off, as impurities, the green tops and outer skin of the sugarbeet nodes, and these contain a lot of sugar. By making this demand in purchasing sugarbeets, viz, paring the sugarbeet node, which weighs 1 or 2 jin, until the white flesh of the beet is exposed, at least 5 qian [1 qian = 5 grams] of a sugarbeet node is cut off. Calculating on this basis, last year Heilongjiang Province pared away one sugar refinery's output. The masses there reacted extremely strongly to this. They said, "This kind of action, which wastes and harms the state's wealth, is simply a crime."

Specialists of the Sugarbeet Research Institute of the Chinese Academy of Sciences, with extreme bitterness, did an accounting: taking the base number of 3,500 sugarbeet seedlings per mu, and an average of 5 qian being pared off each sugarbeet, 175 jin of sugarbeets were pared off 1 mu. Last year Anda County planted sugarbeets on 230,000 mu. With the paring off of 20,125 tons of a high yield of sugarbeets already in hand, calculating 85 yuan in profit per ton of sugarbeets, the county lost 1,710,625 yuan. Calculating the sugar content at 15 percent, this one county of Anda, pared away for nothing 6,037.5 tons of white sugar. Ping Yulin [7458 3768 7792], deputy director of the Sugarbeet Research Institute, said: This method of paring sugarbeets, which alarmingly damages the state's source of refined sugar, is

not confined to this one county of Anda. Both Hulan and Lindian Counties had purchased according to this purchasing standard. Last year Heilongjiang Province's acreage under sugarbeets was 3,842,000 mu. Substracting the acreage which had a reduction in output owing to natural calamities, and thus calculating on the basis of 3.2 million mu, the province will lose 280,000 tons of sugarbeets, equivalent to losing for nothing 84,000 tons of white sugar. Calculating on the basis of 1,600 yuan in income per ton of white sugar, this will cause the huge loss to the state of over 130 million yuan. This is an alarmingly big waste at one stroke.

Why is it that up to now it has been impossible to stop such a huge waste in the sugarbeet purchasing process? The reason is that in some sugar refineries in the province, production techniques are backward and sugar output is low. They do not pay attention to improving the backward production techniques, but instead set their own policy of raising the purchasing standard, without regard for the great amount of waste caused to the state's resources, in a one-sided pursuit of their own sugar output rate. What is strange is: this act of seriously wasting society's wealth, which cheats the state, the collective and the peasant, receives the tacit consent of the leading departments concerned.

The specialists suggested to this reporter that he publish in a newspaper this "economic accounting," which represents a great amount of waste of the state's resources, in order to draw the attention of various quarters to the need quickly to plug this damaging and wasteful leak.

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AGRICULTURAL DEPARTMENT OFFICIAL VIEWS SPRING PLOWING SITUATION

Lanzhou GANSU RIBAO in Chinese 12 Feb 82 p 1

[Interview with Comrade of Provincial Agriculture Department by staff reporter: "Strive for Greater Agricultural Development This Year Than Last"; date and place not specified]

[Text] Recently, this reporter interviewed a responsible comrade of the provincial agricultural department with regard to the question of spring plowing and production. He said: This year we must, using all ways and means and by getting started as early as possible, strive for a greater development in agriculture than there was last year.

Question: What is the general situation in spring plowing and production in our province this year?

Answer: The situation in spring plowing and production in our province this year is fairly good. Following the further implementation of the party's policies and principles and the gradual perfection of various forms of the production responsibility system, the production enthusiasm of the broad masses of peasants is becoming greater and greater. In addition, the weather has been comparatively good. Throughout the province, 1 million mu more of overwintering crops have been planted than last year; 600,000 mu more of land was irrigated in the autumn and winter than last year; and there is close to double the amount of water stored in reservoirs than last year. In production preparations--the land plowed in the hot months and autumn and the accumulation and shipment of fertilizers and seeds--a more solid job was done than in previous years, and at present in most places the soil moisture content is better than in previous years. These are all favorable conditions for doing a good job in spring plowing and production this year. At the same time, it must be seen that some places in the central region received little rain and snow last autumn and winter so that the soil moisture content is deficient, and the supply of drinking water for people and livestock is relatively difficult. In some places in the winter wheat producing areas, because after sowing the cumulative temperature was low and the base fertilizer was insufficient, the wheat seedlings grew weakly and their tillering was deficient. All these things have an unfavorable effect on spring plowing and production in some places.

Question: In order to do a good job in this year's spring plowing and production, what questions need to be addressed?

Answer: First of all, a good job must be done in winter wheat field management. In our province, winter wheat occupies close to half the acreage as that of summer grain crops, and tightly grasping the opportune moments to do a good job in the field management of winter wheat has a great bearing on the wresting of a bumper harvest of summer grain crops this year. If there is a bumper harvest of summer grain crops, we will gain the initiative for the whole year. Every locality must organize cadres, agrotechnicians and experienced peasants to go into the field and make a general survey of the wheatfields, analyze the condition of the young plants, focus on existing problems and take appropriate management measures. At present, in the winter wheat areas the soil moisture content is generally good and the stocks of chemical fertilizers are relatively ample. Each place must tightly grasp the opportune moments before and after the thaw to apply a topdressing of chemical fertilizer so as to promote an increased production of strong sprouts. According to surveys this year, it is very possible that the wheat stem rust in southern Gansu and the (?red dwarfism) [hongaibing 4767 4253 4016] in eastern Gansu will spread to other parts of the province. Every locality must conscientiously strengthen their forecasts of plant diseases and insect pests, make good early preparations of preventive agricultural chemical equipment and do preventive work before plant diseases and insect pests appear in large numbers.

Second, under the guidance of the state plan, carry out the various planting plans in line with local conditions. The agriculture economy must give priority to planning, with market regulation made supplementary. The development of agricultural production must be carried out according to the state plan. We must educate the broad masses of peasants to consider the overall situation and the collective and, in line with the state's requirements, take into account the interests of the state, the collective and the individual and, under the guidance of the state plan, carry out planned planting. We must actively pursue economic contracts, linking the production activities of the collective and the individual commune members to the state's planned arrangements and truly complementing the state's plan. When plowing is begun throughout the province, we must, proceeding from Gansu's actual conditions, actively carry out the policy of "without slacking off on grain production, actively develop a diversified economy"; readjust the distribution of crops in line with local conditions and, while getting a tight grip on grain, actively develop economic crops like oil-bearing crops, beets, cotton, flue-aired tobacco and vegetables; and make full use of this year's advantageous conditions of plentiful irrigated land and good soil moisture content to insure that, according to plan, the planting is done well and in sufficient quantity.

Third, energetically popularize agricultural science and technology so that the land is tilled scientifically. Every locality must list the popularizing of agricultural science and technology as an important item on its daily agenda and conscientiously strengthen leadership over the work of agricultural science and technology. They must, in a planned way, organize

scientific and technical personnel to get deeply involved with production and the masses, to study and solve the actual problems in agricultural production that urgently need to be solved and to resolutely change the situation in which scientific research and production are disjointed. The main effort of scientific and technical departments must be placed on doing research in applied science and on popularizing advanced techniques, so as to serve current agricultural production. They must sum up the practical experiences of the masses gathered over many years and develop the traditional farming techniques of intensive cultivation. They must vigorously recommend and popularize advanced scientific techniques that the masses will be glad to accept, that produce quick results and that bring in more income. This year, on the basis of popularizing well the 19 scientific and technical items already decided upon, they must focus on doing a good job of demonstrating and popularizing major scientific and technical achievements, which have a wide range and produce quick results, such as the widespread production of the seeds of Zhongdan No 2 corn and in 2148 wheat, the spraying of leaves with phosphoric acid phosphate 2 hydropotassium and the nonpotato virus strain of potato. They must vigorously promote the contract system for popularizing agricultural science and technology, organically combining scientific research and popularization work and insuring the popularization and application of every item of agricultural advanced science and technology.

Four, get started as early as possible on efforts to do a good job in taking precautions against or resisting natural calamities. At present, in most places in the counties of Huining, Jingyuan, Gaolan and Jingtai, the water content of the tilled layers of soil is generally less than 10 percent. Leaders at all levels in these places must pay a high degree of attention to this situation and immediately mobilize and organize the broad masses to conscientiously do a good job of taking precautions against drought during spring sowing. They must conscientiously check the soil moisture content, sowing summer grain wherever it can be sown and if the moisture content is deficient, they must not plant summer grain. They must make early preparation of autumn grain seeds, so that autumn grain will supplement summer grain. Concerned departments at the province, prefecture and county level must continue to help these places to solve the problem of providing drinking water for people and livestock. The other places must also always be on the alert and be prepared at any time to struggle against natural calamities that might occur, so that their preparedness will avert peril and they will have seized the initiative.

Five, conscientiously change the work style and earnestly strengthen concrete leadership over spring plowing and production. A large group of cadres must be organized, led by a responsible comrade, to go to the frontline of spring plowing and production to conduct protracted, constant propaganda among the broad masses of basic-level cadres and peasants with regard to upholding public ownership of land and other means of production and to practicing the production responsibility system in the collective economy. No matter what form of the production responsibility system is adopted, if the masses do not want changes then do not make changes, so that the masses will be easy in their minds and do a good job in every part of the production. A tight grip must be kept on the signing of all kinds of contracts, work exchange

and mutual help of a mass nature must be developed extensively and households with difficulties must be helped to do a good job of spring plowing and sowing. During the busiest period in spring plowing, the county and commune cadres, particularly the leading cadres, must stick to their work posts, take part in production, correctly direct production and firmly overcome some bad tendencies at the basic level such as slack and weak work, nobody being responsible for a piece of work and being absent at will from one's work post without permission. All trades and professions must vigorously support spring plowing and production, insuring in all aspects the completion of the tasks of spring plowing and production.

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EFFORTS TO INCREASE QUANTITIES, KINDS OF CHEMICAL FERTILIZERS REPORTED

Proper Kinds, Use of Chemical Fertilizer

Guangzhou NANFANG RIBAO in Chinese 12 Feb 82 p 2

[Article by Lin Guoxiong [2651 0948 7160], Special Correspondent]

[Text] In speaking about problems in the extension of agricultural research and techniques in the government work report he made to the Fourth Session of the Fifth National People's Congress, Premier Zhao Ziyang hoped that a change in chemical fertilizer composition and sensible fertilization could produce more outstanding accomplishments within a relatively short period of time. This hope also has great pertinence for Guangdong Province, and should be diligently studies for a solution.

At the present time, two conspicuous problems exist in Guangdong Province's chemical fertilizer production, supply, and utilization.

First is an inequitable composition of chemical fertilizer in which the proportions of nitrogen, phosphate and potash are not in balance. There are 60 large and small nitrogenous fertilizer plants in the province with an annual production capacity of 2.9 million tons, and 37 phosphate fertilizer plants with an annual production capacity of 1.1 million tons (though actual output does not reach designed capacity), but there is not a single potash fertilizer plant, nor is there a plant that produces compound nitrogen, phosphate, and potash fertilizer. Most of the fertilizer dispense by the central government and that imported by the province is nitrogenous fertilizer, and this further accentuates the proportional imbalance among nitrogen, phosphate, and potash. In 1980, for example, quantity of chemical fertilizer used in the province was 3.82 million tons, of which the ratio of nitrogen, phosphate, and potash was 1:0.23:0.088. Not much change has taken place in these ratios during the last 2 years. Clearly this cannot meet the physiological growth requirements of farm crops inasmuch as the ratio of requirements for nitrogen, phosphate and potash for most farm crops is 1:0.5:1.

Second is the serious waste and loss through runoff of chemical fertilizer, making for a not very high utilization rate. Measurements made by agricultrual science units show the utilization rate of chemical nitrogenous fertilizer (absorption by crops) to be only between 35 and 50 percent, of phosphate fertilizer 10 to 25 percent, and of potash 30 to 60 percent. Research data show that

in foreign countries generally 1 jin of chemical fertilizer can increase grain output by 5 jin, while in Guangdong Province the average increase is only slightly more than 2 jin. The main reasons for the low chemical fertilizer utilization rate are: first, poor packaging, storage and transportation, which causes nitrogenous fertilizer to volatilize. Second is faulty methods of putting down fertilizer causing surface runoff. Thid is ground percolation. In gravelly, porous fields, in particular, loss is greatest. Fourth is dissipation into the air of free state nitrogen (N_2). Temperatures are high in Guangdong Province, and when ammonium-state nitrogen is spread on the soil surface, particularly on alkaline soil, it will gradually liberate ammonia, which volatilizes.

This demonstrates that the utilization potential for chemical fertilizer is very great. Currently Guangdong Province annually uses more than 3 million tons of chemical fertilizer. Were the utilization rate for chemical fertilizer to be raised by 20 or 30 percent, that would equal between 600,000 and 900,000 tons of chemical fertilizer, producing an increase in grain output of between 2.4 billion and 3.6 billion jin, figuring a grain output of 2 jin per jin of chemical fertilizer, and making for extremely impressive economic benefits. Therefore, it is suggested that the following actions be taken:

(1) Gradual restructuring of the composition of chemical fertilizer to increase the phosphate and potash content. In order to change the imbalanced ratio of nitrogen, phosphate, and potash, in addition to running existing nitrogenous fertilizer plants well to upgrade quality and increase quantity, packaging, storage, and transportation should be improved to reduce losses insofar as possible. Existing phsophate fertilizer plants in the province should think of every way possible to increase output of phosphate fertilizer. Because of a lack of sea transportation capacity the Zhanjiang Phosphate Fertilizer Plant, the plant in the province with maximum phosphate fertilizer output, amounting to 250,000 tons annually, loses several tens of thousand tons to other provinces. It is recommended that the province's shipping sector increase the number of ships transporting phosphate fertilizer, and institute transportation on certain ships over certain routes to prevent further phosphate fertilizer from slipping away to other provinces. In future imports of chemical fertilizer, quantities of phosphate and potash should be increased.

(2) It is recommended that chemical fertilizer and organic fertilizer be used in combination. Organic fertilizers such as much fertilizer, barnyard manure, and green manure are sticky in nature. By using them in combination with chemical fertilizer, they will wash away less readily and the supply of nutrients will be evely balanced, and not only will increased yields derive from the immediate crop, but soil will be improved as well. When the phosphate and potash mixed in with organic fertilizer is fully composted for use as a base fertilizer, the effectiveness of the fertilizer is greatly increased.

(3) Scientific use of fertilizer. First of all, nitrogenous phosphate and potash fertilizers should be properly mixed and a change made in overfertilization with nitrogenous fertilizer, which leads to spindling of stems and leaves, disease and insect pest infestations, and lodging. Secondly, in light of the numerous paddy fields and large quantity of rainfall in Gunagdong Province, the scatter method of applying fertilizer must be resolutely reformed, and the deep layer application method promoted in order to reduce the volatilization and runoff of chemical fertilizer.

(4) Strengthening of technical guidance so that fertilization will be done in the right amounts at the right time. Now that the rural villages of the province have universally instituted various forms of a system of responsibility for production, the peasants urgently require a strengthening of guidance in agricultural techniques. We must adapt to these circumstances and vigorously promote methods for the scientific use of fertilizer, increase the utilization rate of fertilizer, and obtain benefits in greater output and greater earnings.

Readjusted Small Plants

Guangzhou NANFANG RIBAO in Chinese 9 Feb 82 p 1

[Text] Readjustment of Guangdong Province's small nitrogenous fertilizer industry, diligent reorganization of enterprises, and restructuring of technology has brought fine economic benefits. Not only has there been no decline in nitrogenous fertilizer production by small plants, but expenditures have also dropped, the number of profitable plants has increased, and the number of non-profitable plants decreased.

Guangdong's small nitrogenous fertilizer industry got its start in 1961 and had 86 plants by 1981, providing a total of 5.47 million tons of nitrogenous fertilizer for agriculture. On the basis of output in 1978, small nitrogenous fertilizer plants provided Guangdong Province's agriculture with 23.8 kilograms of nitrogenous fertilizer per mu of cultivated land. Thus it provided agriculture 80.6 percent of the total amoung of nitrogenous fertilizer produced in the province, fully demonstrating the important role of small nitrogenous fertilizer plants in supporting agriculture. However, in the building of a small nitrogenous fertilizer industry, some problems also existed. There were too many individual plants; the scale was too large; facilities were insufficiently balanced or insufficiently equipped, and economic benefits were rather poor.

In view of the above situation, those in charge of the chemical fertilizer industry in Guangdong Province began in 1979 to act on the principle of "reorganization and upgrading, selective restructuring and gradual readjustment with no further new sites," to carry out a reorganization and restructuring of various kinds in the province's small nitrogenous fertilizer plants. In the case of small nitrogenous fertilizer plants not having the objective conditions needed to produce, and those for which it would be difficult to change a loss situation, closing, merging, suspending and retooling was done. Between 1979 and 1981, readjustment resulting in the closing and suspension of 37 small nitrogenous fertilizer plants was done, thereby enabling a concentration of funds and energy so that other small nitrogenous fertilizer plants possessing fairly good objective conditions could operate well. For those small nitrogenous fertilizer plants retained, emphasis was placed on conservation of energy, reduction of expenditures, and converting losses into profits in a diligent reorganization, improvement of administration and management, and increase in economic benefits. At the same time, some small nitrogenous fertilizer plants possessing fairly good objective conditions and having fairly high economic benefits were selected for technical upgrading and appropriate expansion of the scale of production, turning them into maninstay small nitrogenous fertilizer plants. After 3 years of efforts, the province now has 19 small nitrogenous fertilizer plants with an annual capacity to produce syntehtic ammonia that

has grown from between 3,000 and 5,000 tons to between 5,000 and more than 10,000 tons. Though readjustment during the past 3 years has resulted in the closing or suspension of some plants, the province's output from small nitrogenous fertilizer plants is still higher than 1978 production levels. In addition, quality of nitrogenous fertilizer has improved, and energy consumption has dropped. Statistics show that in 1978, only 68 percent of the ammonium carbonate used for the small nitrogenous fertilizer industry was first quality while in 1981 the percentage had risen to 81. Coal consumption per ton of synthetic ammonia produced for the small nitrogenous fertilizer industry was somewhat more than 3,300 kilograms in 1978. In 1981, consumption declined to somewhat more than 2,500 kilograms. Electricity consumption per ton of ammonia was slightly more than 1,700 kilowatt hours in 1978, but in 1981 it fell to slightly more than 1,500 kilowatt hours. As a result of the decline in consumption for the three years 1979 to 1981 alone, the industry saved the country 316,000 tons of coal, and 80 million kilowatt hours of electricity. Furthermore, as a result of the past 3 years of reorganization and restructuring, the number of profitable plants in the industry has increased and the number of unprofitable plants decreased. The small nitrogenous fertilizer plants in Foshan Prefecture and Meixian Prefecture have turned all their losses into profits.

Increased Use of Potash

Guangzhou NANFANG RIBAO in Chinese 4 Feb 82 p 2

[Text] Guangdong Province's agricultural production has made new progress in promotion of potash fertilizer for use. In 1981, 15 million mu of the province's cropland used potash fertilizer. This was a 5 million mu increase over 1980, and generally increased yields were produced. Surveys done in Meixian, Kaiping, Huiyang, Zengcheng, and Dongguan counties showed that when potash fertilizer was applied to potash deficient soil, paddy rice yields increased by from 10 to 30 percent, and varying degrees of increase in yields also occurred for sugarcane, peanuts, sweet potatoes, and jute.

Potash fertilizer is one of the "three main elements" in fertilizer that is indispensable to crop growth. Guangdong Province has high temperatures and much rainfall, and weathering and leaching are strong. This plus the universal promotion of the growing of high yield varieties, of steady increases in the multiple cropping index and levels of output has meant an ever increasing depletion of potash in the soil. However, for a long time fertilization with nitrogenous and phosphate fertilizer has steadily increased in the province, while fertilization with phosphate has been extremely limited. This has produced an increasingly serious lack of phosphate in the soil, which has impaired increased crop yields. In light of this situation, in recent years every prefecture in the province has linked soil surveys to diligent experiments in the use of potash fertilizer, and they have also done demonstrations and conducted propaganda promotion. In 1981, quite a few places made use of potash fertilizer a major action for increasing agricultural yields. In 1981 Huiyang County put together 1,080 tons of phosphate fertilizer for use on an area of 130,000 mu for an average of between 15 and 30 jin of potash per mu, which produced very clear increases in yields. In 1981, Chenjiang Commune in this county used potash on an area of more than 3,200 mu or 70 percent of its paddyfield

area. Despite serious disasters, paddy yields averaged increases of slightly more than 60 jin per mu over 1980. At Jinji Commune in Luoding County, the soil was seriously deficient in potash causing widespread outbreaks of leafspot of rice. For the 1981 late crop, the commune summarized the experiences of individual peasant households in gaining increased yields from the early crop through increased fertilization with potash fertilizer. The entire commune promoted fertilization with potash over wide areas, covering an area of 10,000 mu. As a result, incidence of leafspot was greatly reduced in a year of great disasters, the commune's late crop brought in a 200,000 jin increase in paddy over 1980.

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CSO: 4007/238

OVER 80,000 FARM MECHANICS GIVEN TRAINING

Guangzhou NANFANG RIBAO in Chinese 5 Feb 82 p 1

[Article: "More than 80,000 Farm Mechanics Trained In Province in 1981"]

[Text] Last year farm machine units and farm machine schools at all levels in the province used diverse methods to train more than 80,300 mechanics for farm machines of different kinds, making a contribution in promoting development of farm machine endeavors.

In the wake of establishment of various forms of rural system of responsibility for production, the number of tractors used in farming by collections of individual peasant households has steadily increased, and numerous peasants urgently need to increase their knowledge of farm machine mechanics. In order to meet this new situation, farm machine units and farm machine schools at all levels used a combination of surrogate teaching, group teaching, and schools and communes (and plants), as well as teachers sent out to train mechanics for communes and brigades. Inasmuch as Shunde County has many economic crops, and many motorized boats, and since commune and brigade enterprises there have developed fairly rapidly, the Shunde County Farm Machine School also trained commune and brigade electricians, diesel power generator unit managers, farm electricity managers, boiler operators, turbine operators, motorized boat drivers and mechanics. As a result of the steady increase in motor vehicles used in agriculture, the farm machine schools in some counties also took responsibility for training drivers for farm vehicles.

Guangdong Province's farm machine training network has now been substantially completed. The province, prefectures, and counties have farm machine schools, and most communes also have certain training capabilities.

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BRIEFS

GUANGDONG AFFORESTATION EFFORTS--Last year the Tongshi reclamation area in Guangdong Province planted 22,500 mu of shelter forests and economic forests and grew more than 12 million saplings. As of the present time, the reclamation area has afforested a total of 252 million mu. Last year, the Tongshi reclamation area instituted a general system of responsibility in forestry whereby it contracted plantings, survival, and care to increase the survival rate of trees that had been planted. Early last year, Longjiang Farm planned the land to be afforested and set up a special afforestation corps, with individuals being assigned duties. Once a tract had been planted, an individual was designated responsible for taking care of it to ensure survival of afforested areas. Last year, the farm planted more than 2,300 mu of shelter forests with a survival rate of 95 percent. All farms also layed out an equitable distribution of trees, planting in the designated areas Casuarina equiselifolia, Eucalyptus parvifolia, Eucalyptus rubusta, and Taiwan Acacia confusa as shelter forests, while at the same time vigorously afforesting economic forests as well. The state-owned Xinjin Farm treated afforestation as an important task, devoting great attention to it, and preserving each mu planted. Over the years, Nanmao Farm has afforested 1,000 mu of economic forests. The Eucalyptus citriodora that have been planted can be used not only for roof purlins, but each tree can annually provide about 2 jin of Eucalyptus citriodora oil, providing an income of more than 930 yuan per mu. [Text] [Beijing ZHONGGUO NONGMIN BAO in Chinese 11 Feb 82 p 1] 9432

CSO: 4007/227

BRIEFS

RECORD LAMB PRODUCTION--Since the 3rd Plenum of the CCP Central Committee, lamb production in Hebei Province has expanded by a fairly large amount every year for 2 consecutive years. In 1980, the numbers of lamb in inventory in the province were 8.1486 million head, the numbers removed from inventory were 1.7486 million; both figures were the highest in provincial history. In 1981, the numbers remaining in and removed from the provincial inventory further expanded; they reached 8.4233 million head and 2.4353 million head respectively, an increase of 3.4 percent and 39.3 percent over 1980. [Excerpt] [Shijiazhuang HEBEI RIBAO in Chinese 19 Mar 82 p 2]

FAT HOG INVENTORY REMOVAL RATE--In recent years, the rate of fat hogs being removed from inventory in Hebei Province has continuously increased, as have the numbers of head removed from inventory. According to statistics, the fat hog removal rate from inventory in 1979 in Hebei was 54.3 percent and the numbers of fat hogs removed from the inventory were 6.767 million, the highest level in the province's history. In 1980, fat hog removal rate from inventory was 52.4 percent and the numbers removed were 7.089 million head; although the rate of removal decreased somewhat, the numbers of head removed increased by 4.6 percent, still a historical record for the province. In 1981, the rate of removal reached 57.6 percent, a large increased over 1980; numbers of head removed reached 7.454 million, an increase of 364,000 head over 1980, reaching the highest levels in the province's history for 3 consecutive years. [Excerpt] [Shijiazhuang HEBEI RIBAO in Chinese 19 Mar 82 p 2]

CSO: 4007/374

BRIEFS

OIL-BEARING CROP PROCESSING--Last year the grain departments throughout the province processed 170 million jin of small oil-bearing crops, setting for our province a new record in this respect. Both the amount processed and the amount of oil produced were raised by 1.6 times as compared with those of 1980. In order to expand the capacity of oil-bearing crop processing, the provincial grain bureau renovated some older factories and allocated 110 pieces of special-purpose equipment, which were installed and put into operation that year and which produced results that could be seen in the same year. For the whole year, the income from processing equaled over 2 times the total investment. The grain administration bureaus in Nenjiang and Huankua, the key oil-bearing crop-producing areas, also formed technical teams that went from factory to factory providing technical guidance and timely solving key production problems, so that the amount of crops being processed continually increased and the oil-extraction rate continually rose. The average oil-extraction rate for the whole year rose 1.71 percent over the state's prescribed standard, and the oil produced for the year increased by 414 million jin, with a value of over 9 million yuan. Oil-bearing crop processing factories throughout the province have widely popularized the method of using sunflower seed casings to replace raw coal in firing boilers, so that there is no need to use raw coal in processing sunflowers, thus saving for the whole year a total of 28,000 tons of raw coal. [Text] [Harbin HEILONGJIANG RIBAO in Chinese 8 Feb 82 p 1] 9727

CSO: 4007/249

BRIEFS

ACHIEVEMENTS FOR 1981--1. An overall bumper agricultural harvest was reaped, with a total grain output of 18.34 billion jin and a total oil-bearing crop output of 650 million jin, respectively 7 and 23 percent higher than for the bumper harvest year of 1980, both breaking the previous highest historical levels. 2. A key commodity grain base, Yishu County, on a per capita basis sold over 1,400 jin of commodity grain to the state, and was for the agricultural population of the whole country one of the counties that sold per capita the most commodity grain to the state. 3. The Jilin Chemical Industry Company, getting a tight grip on enterprise reorganization, obtained outstanding economic results. Last year, it overfulfilled ahead of schedule the state plan by 33.2 percent, fulfilling its profit plan. 4. The successful research of technique and equipment by the Jilin Finance and Trade Academy for the manufacture of protein meat from soybean plants has been adopted by over 100 factories in the county, which are now supplying the people with this nutritious food, which is of high quality and low price. 5. With regard to "Jilin's three jewels," which are famous at home and abroad, the amounts of ginseng and pilose antlers purchased respectively increased by 40 percent and over 4 percent over the amounts in the historically highest year of 1980. The amount of sable skin purchased also increased. [Text] [Harbin HEILONGJIANG RIBAO in Chinese 13 Feb 82 p 4] 9727

CSO: 4007/249

COTTON GROWING EXPERIMENTS USING PLASTIC SHEET MULCH

Shenyang LIAONING RIBAO in Chinese 31 Jan 82 p 1

[Article: "Remarkable Results from Large Area Experiments Using Plastic Sheet Mulch in Cotton Fields Through Cooperation By Provincial Cotton and Hemp Research Institute, and the Chaoyang, Jinzhou, and Liaoyang Science Commissions"]

> [Editor's Note: More than 2,700 mu of experimental cotton-fields have produced ginned cotton yields of from 123 to 172 jin per mu, an increase of 50 to 65 jin per mu as compared with direct sowing, for a between 45 and 113 percent rate of increased yields, opening a new road in the advancement of Liaoning Province's cotton production.]

In 1981 the Provincial Cotton and Hemp Research Institute formed a cooperative team with the science commissions of Chaoyang, Jinzhou, and Liaoyang to conduct large area experiments using plastic sheet mulch in cotton fields in 11 test-site brigades, two communes, and one county, which won outstanding results. From the more than 2,700 mu of cottonfields where plastic sheet mulch was used, yields of ginned cotton ranged from 123 to 172 jin per mu, an increase of from 50 to 65 jin per mu as compared with directly seeded cottonfields, and a rate of increased yields ranging from 45 to 113 percent. From more than 2,400 mu of plastic sheet mulched cotton fields in the Kharchin Leftwing Mongolian Nationality Autonomous County, where rarely encountered high temperatures and draught, ginned cotton yields averaged 123.7 jin per mu, a 65.5 jin per mu increase over ordinary production fields. This pioneering experiment for the purpose of promoting development of cotton production in Liaoning Province paved a new road toward becoming a province that come closer in reaching the goal of producing 100 jin ginned cotton.

The research not only further affirmed the effects of plastic mulch in increasing yields, but also clarified the nature of increased yield effects. From the plastic mulch farming, "three improvements" in cottonfield ecological conditions were introduced, thereby bringing about "three breakthroughs" in cotton farming. The "three improvements" were: First, improvement in the ground temperature conditions in the layer to which seeds are sown and the layer where roots form. Second, improvement in distribution of soil moisture

in the cultivated layer, thereby solving the contradiction in the province's cotton growing region between spring drought and the sowing of seeds and protection of seedlings. Third, improvement in soil structure and the chemical properties and light and heat effects in the cultivated layer, creating fine material conditions for promotion of cotton plant growth and development both above and below ground. "The three breakthroughs" were: First, a partial breakthrough in ecological conditions for cotton. Mulched cotton fields had an increase of from 250 to 300 degrees of accumulated heat during the entire growing season as compared with directly sown fields, which solved, to a certain degree, the problem of low spring temperatures, slow growth of young seedlings, and danger from early frost late in the growing season. The growing season was lengthened relatively by from 9 to 15 days, climate resources thereby being made full use of for extremely remarkable results in increased yields. Second was a breakthrough in the progress of cotton growth. After plastic sheet mulch was used for culturing, the progress of cotton growth saw the emergence of seedlings around 5 May, squaring around 5 June, blossoming around 5 July, boll opening around 5 September to lay a foundation for early ripening, high yields, and fine quality cotton. Third was a breakthrough in yields per unit of area. Both the tremendous increase in yields and the degree of consistency from plastic sheet mulch cotton fields was unprecedented. Not only was there a great breakthrough in output from plastic mulch cotton, but the number of flowers before the arrival of frost increased, fibers lengthened, the ginning outturn rate increased, strength increased, and quality improved.

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CSO: 4007/215

FOOD INDUSTRY DEVELOPMENT URGED

Shenyang LIAONING RIBAO in Chinese 17 Jan 82 p 2

[Editorial: Rapidly Develop the Food Industry"]

[Text] "The people regard food as paradise." The food industry occupies an extremely important position in the lives of the people and the economy of the country. The stability of the nation, the prosperity of the economy, improvement in the life of the people, and the flourishing of tourism all require accelerated development of the food industry.

Since the founding of the People's Republic, the food industry in Liaoning Province has seen considerable development. It already has 18 different industries devoted to the processing of rice and other grain, producing edible oils, reproduction made from the processing of rice and other grains, salt manufacture, sugar refining, making of cigarettes, canned goods, wine making, candies and pastries, condiments, milk products, starch, meat and poultry products, bean products, products made from the processing of vegetables, beverages, edible fungi, flavorings and spices to form a definite foundation and strength for the food industry. However, in terms of the needs of people's livelihoods, demands are still not being met, and quite a gap still exist in comparison with advanced regions of the country. Currently quantities of some food products are inadequate with supply not meeting demand. Products made from beans, name brand fine white wine, and beer in particular, and already popularized supplementary foodstuffs such as soy sauce, vinegar, bean sauce, and pickled vegetables have yet to be supplied widely in rural villages. For a long time children's foods have stagnated in the manufacture of sweetened rice flour powder. Convenience foods universally needed by people, and curative foods still constitute a gap requiring filling. Quality of candies and pastries is not high, and varieties and colors are monotonous, packaging is not done with much taste. Quite a few comrades bring back vermicelli and pastries when they return from trips elsewhere, does this not show that the food industry in this province should rouse itself to catch up?

Liaoning Province possesses numerous advantageous conditions for development of a food industry. Its farm livestock, sideline occupation, and fishery resources are fairly abundant, and the southern and western regions produce

produce fruits, while in eastern and northern mountainous regions, wildlife resources proliferate. The province has a long coastline, and aquatic product resources are also abundant. At the present time, however, these resources are not being fully developed and used. It should also be realized that even though food production in the province is fairly weak, capabilities for development are great; from fermenting techniques to machine processing, and chemical treatment of foods, and large, medium, and small-scale enterprises have been linked together to form a food industry system. There are more than 10 comprehensive and specialized food science research organizations, and results of research appear steadily. If only we will make the most of strengths and make up for weaknesses, rapid development of the food industry is entirely possible.

Requiring solution now is an increase in understanding of the importance of the food industry. The notion that food is nothing but a small matter of eating and drinking and that the heavens will not collapse if no special attention is given to it is mistaken in the extreme. It should be realized that investment required is small, results are rapid and benefits great in the food industry, that it is closely bound up with the lives of the people, and it positively cannot be disregarded. Inasmuch as there are numerous kinds of food industries and numerous trades, and since it cuts across numerous kinds of food industries and numerous trades, and since it cuts across numerous sectors, all jurisdictions should rapidly set up food industry societies to prepare and organize, to make overall plans, and to take responsibility for overall situation. A policy of "unified planning with multiple company managing and push forward combined enterprise" should be adopted. Now is the time for investigation and study to get an understanding of basics and, on the basis of the region's resources and advantages, to set clearly the direction and emphasis for development of the food industry. Looked at the province as a whole, convenience foods, children's foods, beer, beverages, products made from beans, condiments, candies and pastries, famous brand distilled spirits, and curative foods should be the products emphasized for development. All jurisdictions should also give attention to research and readjustment to economic policies that are favorable to the development of the food industry in order to give the food industry more support and financial assistance.

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BRIEFS

RECORD COMMODITY SUPPLY--A remarkable increase has taken place in commodities supplied to markets by Liaoning Province's agriculture and light industries, which has strengthened the material foundation of markets. This is a major indicator of the province's economonic development. Last year, the province's agriculture provided markets with agricultural and sideline products with a total value of 3 billion yuan, a more than 50 percent increase over 1980. Products included soybeans, peanuts, fresh fruits, vegetables, the procurement quantities of which increased greatly. Supplies of goods provided markets by the light and textile industries had a value of almost 6 billion yuan, a 7 percent increase over 1980. This included a general increase in products needed in the daily lives of the people. Supply of small commodities and articles used by minority nationalities also improved. There were almost 10,000 designs, colors, sizes, and varieties of goods, and 128 products that are regarded nationally or within the province as fine quality name brands. Increase also occurred in goods brought in from other provinces and goods received through imports. Total output of products supplied to markets exceeded the all-time high to lay a foundation for stabilization of the market and satisfying holiday market requirements. [Text] [Shenyang LIAONING RIBAO in Chinese 7 Jan 82 p 1] 9432

CSO: 4007/215

RECORD HIGH FOR LOAN REPAYMENT ESTABLISHED

Beijing ZHONGGUO NONGMIN BAO in Chinese 4 Feb 82 p 2

[Article by Pan Mengyang [3382 1125 7122]: "Ningxia Hui, Han Commune Members Enthusiastically Repay Agricultural Loans: The 1981 Agricultural Loan Repayment Rate Sets Record of 112 Percent"]

[Text] In Ningxia the broad Hui and Han commune members and commune-brigades collectives took the initiative in going to the banks and credit cooperatives to repay agricultural loans totaling over 53.7 million yuan. The agricultural loan repayment rate reached 112 percent, 21 percent higher than last year and a new historical record.

In 1981, Ningxia released 47,850,000 yuan in agricultural loans and recovered 53,710,000 yuan. This reverses the trend of many years in which agricultural loans were issued slowly, in short supply and with unsatisfactory results. This is an entirely new situation in which agricultural loans are issued quickly, are in adequate supply, produce good results and have a quick rate of return. Fifteen of the 18 municipalities and counties achieved a balance in loan recovery in 1981. This was especially true for five counties in Guyuan Prefecture which had been so poor and backward. Last year, the grain crops had reduced production because of drought, so the broad commune members used loans to develop diversified economy, provided for themselves through production and increased their income. They were very grateful to the party and the state and took the initiative in using their income to repay the loans. This prefecture had a repayment rate of 121 percent. The Hui nationality area of Jingyuan County had a repayment rate of 158 percent. Some commune members shook hands with the loan office personnel saying: "If it were not for the loans which enabled us to purchase draft animals and seeds and to improve diversified economy we could never have made so much money. The first thing to do with this money is to repay the state."

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CSO: 4007/231

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EARLY RELEASE OF AGRICULTURAL LOAN--In order to solve the problem of communes, brigades, and commune members and masses' insufficient funds during spring plowing and production, and in order to plant enough autumn grain and oil-bearing crops to ensure a bumper harvest in agriculture in 1982, the provincial agricultural bank and grain department recently studied and decided to release early the 1982 autumn grain and oil-bearing crop loan for advance purchase deposits of 22.18 million yuan. This is to meet the needs of changes in the rural area production responsibility system. For those production brigades that have already contracted production or work tasks to individual households (groups), contracts must be signed by the households (groups) at the time the loan is released. In order to integrate the release of this loan for advance purchase of grain and oil-bearing crops with the past debts (with the exception of the deposits for advance purchase of wheat last autumn), all areas must carry out well ideological and political work, conscientiously advance further the clearance of past debts, collect those that can be collected, exchange [zhuan huan 6567/2255] [reissue] loan notes for those that cannot be collected temporarily, implement the task of recovering debts and make maximum use of the loan for advance purchase deposits. [Excerpt] [Taiyuan SHANXI RIBAO in Chinese 18 Mar 82 p 2]

GRAIN OUTPUT BUMPER HARVEST--Shanxi Province's total grain output in 1981 was 14.5 billion jin, an increase of 800 million jin or 5.7 percent over 1980. This was the 3rd bumper harvest year since the establishment of the PRC, following those of 1975 and 1979. Of the total grain output, wheat output increased 8.6 million jin over 1980. The autumn grain base output remained the same as 1980's. Oil-bearing crop output in the province was 242 million jin, a decrease of about 9.5 percent compared to the bumper harvest of 1980, which was the highest-yielding year in the province's history. This oil-bearing crop output is the 2nd bumper harvest year since the establishment of the PRC. Sugar beet output in the province was 321 million jin, an increase of 37 percent over the 1980 output. This was the highest level of the province's sugar beet output. This was the highest level of the province's sugar beet output. Tobacco leaf output was 6.48 million jin, twice the 1980 output. As for cotton output, it decreased by 19.4 percent compared to 1980 due to a spring drought and much precipitation in the autumn. At present, rural areas in the entire province are intensifying their preparation for spring plowing in order to achieve an even greater result in agriculture this year. [Excerpt] [Taiyuan SHANXI RIBAO in Chinese 18 Mar 82 p 1]

CSO: 4007/377

BRIEFS

ACHIEVEMENTS IN AGRICULTURE, OTHER FIELDS--1. Encountering a flood situation, the likes of which had not been seen in 100 years, agriculture's total output value still increased by 3 percent above that of 1980, history's highest level, among which grain output increased 600 million jin and oil-bearing crop seeds increased over 260 million jin. 2. Over the whole year, 32.5 million pigs were removed from inventory, 19 million pigs were sold to the state and at the end of the year 51.6 million pigs remained in inventory. These three items were among the best in the country. 3. Our country's first high-flux experimental reactor was completed in Sichuan and is operating well. It provides our country with an important medium for developing its atomic energy industry. 4. Chongqing municipality completed the large overhead passenger cableway across the Jialing River. The cableway can transport 1,300 passengers an hour. 5. In Chengdu, our country's largest and best equipped natatorium was completed. [Text] [Harbin HEILONGJIANG RIBAO in Chinese 13 Feb 82 p 4] 9727

CSO: 4007/249

PROMOTION OF SCIENTIFIC FARMING AT GRASSROOTS LEVEL PUSHED

Kunming YUNNAN RIBAO in Chinese 2 Feb 82 p 2

[Article by Li Daoping [2621 6670 1627]: "Use of Diverse Methods to Promote Agricultural Science and Technology"]

[Text] Jinggu Commune in Jinggu County is a commune in a semimountainous area that grows both grain and tea. In 1981, the commune's grain output totaled 10 percent more than during the previous year, and quantity of tea procured was 20 percent more than during the previous year. Aside from its implementation of policies and the fine weather, the reason for Jinggu Commune's harvest of bumper crops of both grain and tea lay in promotion of agricultural science and technology. In 1981, this commune did the following in the way of introducing and promoting agricultural techniques.

1. It set up science and technology households. Scientists and technicians selected from among Jinggu, Tuanshan, and Yunpan brigades several commune members who believed in science and who had experience in production. After gaining their agreement, these were designated science and technology households with responsibilities for promotion of advanced technical experiments and demonstrating subjects. Following a period of technical training, the 98 science and technology households in the three production brigades assumed responsibility in conjunction with farm scientists for experimental projects in the introduction of superior varieties of rice, tea, and wheat, with startling results. Commune member Ji Wenxue [4764 2429 1331] of Tuanshan brigade was responsible for the introduction of experiments on a new variety of glutinous paddy, his 0.7 mu producing 640 jin of glutinous paddy. Ji Wenxue said happily, "I want to be a science and technology household again next year to promote more new techniques and new superior varieties here."

2. It launched consultation services. In order to do a good job of farming on fields for which production had been contracted, commune members frequently sought the advice of farm scientists on agricultural science and technology. The commune farm science station set up a special consulting service project, and any commune member who came to its doors seeking instruction was given an answer on the spot. At the place that sold pesticide in the supply and marketing cooperative, farm scientists Li Dayun [2621 1129 7189] taught commune members how to mix and use pesticides. During the year, the farm science station answered questions for 1,000 people. For commune members who were still unable

to understand techniques after having been given an explanation on the spot, the farm science station wrote out a "prescription," writing on a piece of paper in everyday language a detailed explanation to the question that the commune member had asked. Another method the consultative service used was to go to households and give practical help to commune members in solving difficulties with technology.

3. It promoted systems of responsibility linking science and technology to output. Last year, the technicians and commune members of six households in this commune signed a farming contract for a bumper rice harvest following the wheat harvest, and the technicians signed a contract with 11 commune member households for the specified growing of corn and wheat. Results of these agreements were that, except for one household that diverted to another field the fertilizer that the farm science station had invested in a field linked to output and another household that suffered a reduced output because it omitted to use insect spray, the other 12 households had increases in output, and three households maintained the outputs that they formerly had had. Both the farm science personnel and the commune members benefited. Now more commune members have entered into agreements with the farm science station for growing of bumper harvest of rape and bumper harvests of early millet.

While promoting agricultural science and technology, Jinggu Commune also attended to science popularization and propaganda work. They used blackboard newspapers, charts, propagandizing on the streets, and the running of training classes to introduce general knowledge of agricultural science to the masses, and to train a group of mainstay science and technology cadres. Now the commune has more than 160 mainstay science and technology cadres, all of whom have mastered a certain amount of knowledge about agricultural science, who are the commune's leaders in scientific farming.

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CSO: 4007/227

MEETINGS ON AGRICULTURAL PRODUCTION RESPONSIBILITY SYSTEM HELD IN KUNMING

Kunming YUNNAN RIBAO in Chinese 12 Dec 81 p 1

[Article by Yu Zhi [3768 6347]: "National Agricultural Production Responsibility System Discussion Meeting Held in Kunming"]

[Text] A national meeting to discuss problems on agricultural production responsibility system was held in Kunming on 9 December.

This discussion meeting was jointly convened by the Institute of Agricultural Economics of the Chinese Academy of Social Sciences and the Yunnan Provincial Academy of Social Sciences. Participants in the meeting were experts, scholars and comrades in positions of responsibility and doing practical work from the Chinese Academy of Social Sciences and affiliated units, and from all province, municipalities and autonomous regions totaling 110 persons.

The main purpose of this meeting was to study and explore the new situations and new problems that had arisen following the practice in rural areas of a system of responsibility for production. This included matters such as problems in the evaluation of the system of fixing output quotas for individual households and assigning households full responsibility for task completion; how to accurately understand and grasp the problems of both collective management and the contract system and the problem of combining collective management with the contract system; how to correctly evaluate new collective economy of different forms through peasants' initiative and its problems in the development and future; and how the rural management system should carry out restructuring while adhering to the principles of "two long-term constant": no changes for a long period of time in the system of public ownership of land, and no changes for a long period of time in responsibility system. Application of the fundamental principles of Marxism-Leninism, analysis and study of these new problems, and working out suitable solutions were tasks proposed by this meeting.

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INCREASED TEA PRODUCTION BENEFITTING STATE, PEASANTS

Hangzhou ZHEJIANG RIBAO in Chinese 3 Feb 82 p 1

[Article: "Increased Tea Production Can Benefit the State and Peasants With Greater Incomes--Zhejiang Province Inaugurates a Policy of Setting Quotas for Tea Procurements With Higher Prices for Over-Quota Sales"]

[Text] In 1981, Zhejiang Province continuously pursued the policy of setting tea procurement quotas with higher prices for over-quota sales. This policy can lead to four advantages: promotion of tea production and procurements, higher profits for tea processing plants, more benefits for peasants growing tea, and greater financial accumulation for the state.

First of all, the policy of setting quotas for tea procurement and higher prices for over-quota sales stimulates the initiative of tea production by tea-growing peasants and communes and production brigades in tea-producing areas. In 1981, tea production in Zhejiang Province was about 1.72 million piculs, more than 10 percent over the amount in 1980. Tea procurements in 1981 were 1.56 million piculs, 15 percent over the amount in 1980. Both 1981 production and procurement figures are the highest in history. In 1981, peasants sold the state 540,000 piculs of tea over the quotas with higher price income of 23.31 million yuan, an increase of 10.21 million yuan over 1980.

The tea-producing counties have an overall political view and see the entire situation. They supplied the state-operated tea processing plants with abundant raw materials--tea leaves procured from peasants. The tea processing plants adopted mean encourage over-quota sales and to return most processing profits e counties supplying the over-quota tea leaves. In 1981, the total re. d profits to the counties supplying tea amounted to 4.08 million yuan; the amount was exclusively used to support tea production. In 1981, the various state-operated tea plants earned an over-quota profit of an additional 680,000 yuan more than in 1980.

The state also had a corresponding gain in financial accumulation from increases of volumes in tea production, processing and sales. In 1981, the tax revenue income to the state treasury due to tea procurement was 75.37 million yuan, 4.26 million yuan over 1980.

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USE OF ORGANIC FERTILIZER TO ACHIEVE BUMPER HARVESTS URGED

Hangzhou ZHEJIANG RIBAO in Chinese 9 Feb 82 p 1

[Editorial by Zhen Xiazheng [7115 2556 1794]: "Present Composition of Fertilizers Hampers Increase in Agricultural Output Since Organic Fertilizer Should Be Stressed to Achieve Bumper Harvests"]

[Text] Crops require fertilizer as food, so adequate fertilizers should be available in preparation for plowing.

This year the complaint of "fertilizer shortage" was heard in many localities; however, some people noticed that no commune members came to cities to collect garbage from street and lane residents. Very few peasants still blend soil with ash from straw. No peasants fight to collect feces and urine in the cities....Look at the statistical tables of agricultural departments: the 1981 cultivated area of green-manured crops in Zhejiang Province was reduced by more than 600,000 mu. A shortage of grass seeds was projected but there is an inventory of 5 million jin. This is an abnormal phenomenon. If there is a shortage of fertilizer, why is this fertilizer source overlooked?

Some comrades who are aware of the situation in the rural areas pointed out that at present people yearn only for chemical fertilizer. Urea and ammonium sulfate are needed, the more the better. It seems that organic manure is out of fashion.

This is reallly an alarming and mounting trend. The proportion of organic manure used by peasants is steadily declining. In some areas only 20 to 30 percent of fertilizer is supplied by organic manure but there are cases where hundreds of jin of chemical fertilizer is applied annually per mu of farm field. What is the result if only chemical fertilizer is applied? Let us look at some facts from recent years.

First, crops are deficient in nutrition so their growth is retarded, causing low outputs. Just as a person needs different nutrients from different foods, a crop needs more than ten types of nutrients during its growth process. Organic manure is a complete fertilizer, containing not only the three major elements (nitrogen, phosphorus and potassium), but also minor elements like calcium, magnesium, sulfur, and iron, as well as trace elements like boron, manganese, copper, zinc, molybdenum and silicon to meet a crop's requirements.

At present, the reduction in organic manure reduces the amounts of some nutrients required by a crop. This imbalance in nutrients leads to nutrition-deficiency diseases. The flowering of rape without bearing seeds is a symptom of boron deficiency. At the beginning, the boron-deficiency disease only occurred in one or two counties, but now rape crops planted in 32 counties suffer from this deficiency, necessitating boron spraying onto an area of 1.5 million mu, occupying more than 43 percent of the total rape cultivation area in these counties. Because of the boron deficiency, cotton plants grow buds but not flowers; wheat plants bear no grains in empty hulls. Moreover, orange trees suffer from a deficiency of iron and manganese; paddy rice plants are deficient in zinc and silicon; and cotton plants suffer from potassium deficiency. More and more severe situations are developing. According to statistics from four counties (Cixi, Shangyu, Xiaoshan, and Haiyan), more than 170,000 mu of cotton plants suffered from stem blight in 1981 due to potassium deficiency. Cotton harvests were reduced by 10 to 20 percent.

Secondly, crop pests are spreading. Crops relying mainly on nitrogen chemical fertilizer have lower pest resistance and contract diseases more easily than those treated with organic manure. This was the situation in recent years. Using specialized terminology, this is an increase of non-protein nitrogen and weakening of pest resistance. According to information from comrades in agricultural departments, in recent years there were wide outbreaks of stripe rust disease, leaf blight and spot, and spike-neck pests. Although these outbreaks are related to meteorological conditions, yet higher pest rates, wider outbreak areas, and more serious diseases occurred in regions with heavier applications of chemical fertilizer than other regions. From data provided by Yinxian County, according to studies of 50 plots of late-maturing rice fields in 1980, with heavier application of chemical fertilizers, in indexes of leaf blight and spot were correspondingly higher and outputs lower. In that year, 1980, there was 245,000 mu of early maturing rice fields suffering from the outbreak of leaf blight and spot; the loss of grain amounted to 38 million jin.

Thirdly, the soil crusts over and fertility declines. New low-output fields are appearing. According to studies both at home and abroad, approximately 70 percent of crop nutrients are derived from the soil, therefore land cultivation requires maintaining soil fertility, thus requiring the application of organic manure. With reduced application of organic manure, soil fertility is not replenished after exhaustion, thus causing lower harvests. For example, of the cotton harvests in Cixi County, in the past, areas planted to green-manure crops amounted to 80-90 percent; later the percentage gradually dropped to under 15 percent. Moreover, a smaller number of hogs were raised, resulting in less barnyard manure. Year after year, chemical fertilizers were mainly relied upon, resulting in continuously decreasing organic matter in the soil. According to surveys by the Zhejiang Provincial Academy of Agricultural Sciences, in 3 years the reduction of organic matter in cotton fields is 10 percent if no green manure crops are planted. At present, about 79 percent of the cotton fields in Cixi County suffer deficiency or serious deficiency in organic matter. Year after year of cultivation has led to greater and greater soil crusting; the cotton yields

were reduced to about 70 jin from more than 150 jin per mu. As some commune members said, "how can you expect a bumper harvest if cotton is planted on hard-surfaced highways?"

Additionally, there are abnormal changes: thinner blades of mulberry and tea leaves, diluted flavors in melons and fruits, lower quality of rice grains, and smaller cotton bolls; every one of the abovementioned phenomena is related to the shortage of organic manure.

We can see that good crop harvests cannot be obtained by applying less organic manure. We stress organic manure: this is not a temporary measure to solve the fertilizer-shortage problem. This is a strategic plan to ensure high and steady crop harvests with high quality and low cost.

There is a farming proverb in Zhejiang Province, "Two types of valuables in farming: hog manure and safflower." Viewing only the immediate and temporary economic benefit, some people believe that cultivation and the accumulation of manure are not as good as simply buying fertilizers. They discard these two valuables; this is an incorrect policy. Some other peasants receive endless benefits only understanding these valuables. Since the development of duckweed cultivation in paddy fields from 1979 on at Taoshan Ward of Rui'an County, the annual increase of grain output has been more than 100 jin per mu. The Lujiawan Production Brigade in Deqing County and Zhongan Brigade in Tongxiang County had for the past 6 or 7 years a per mu output of more than 2000 jin of grain. Not only were bumper harvests obtained in grains and mulberry leaves, but also high and steady production of fish raised in ponds. One of their primary conclusions is the application of large amounts of barnyard manure, river mud, and miscellaneous soil-blended manure, as well as returning to the field of rice straw and wheat stems. Each year, the return and renewal of organic matter to the farm field amounted to 2000 jin per mu. Hence, soil fertility was increased with greater cultivation. As always, yields of late-maturing rice in Zhejiang Province have not been high and steady. However, in these two brigades the per mu yields of late-maturing rice amounted, respectively, to 910 and 966 jin. This is a good example showing that fertile soil leads to bumper harvests.

At present, more and more countries recognize the importance of applying more organic manure. In recent years, a large number of people were sent from abroad to Zhejiang Province to learn about what has been achieved in applying organic manure; some people even stayed for a long period to study the cultivation of duckweed in paddy fields. In 1981, the Soil Resources and Protection Section of United Nations FAO organized experts from 11 countries in the Asian Pacific area to visit China to study the utilization of green manure. Engaging in many years of "inorganic farming," these countries now stress organic manure. Why do we, traditionally stressing organic manure, conversely now discard the organic manure?

This is the reason why the agricultural experts have been demanding the use of organic manure in farming.

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AGRICULTURAL BANK SUPPORT TO COMMUNE, BRIGADE ENTERPRISES

Hangzhou ZHEJIANG RIBAO in Chinese 28 Jan 82 p 1

[Article: "1981 Loans of 1.4 Billion Yuan to Commune and Brigade Enterprises by Agricultural Banks in Zhejiang Province--Support the Commune and Brigade Enterprises to Develop Production of Consumer Goods by Utilizing Local Resources"]

[Text] According to the policy of national economic readjustment, different levels of agricultural banks and credit unions of Zhejiang Province granted loans of 1.4 billion yuan to commune and production brigade enterprises to support them in the development of consumer goods production by adequately utilizing local resources.

Last year cadres of agricultural banks and credit unions of some regions of the province toured rural areas to investigate and study more than 30,000 commune-and production brigade-operated enterprises. According to the production, supply and sales trends of products as well as the management and administration situations of these enterprises, the banks and credit unions selected enterprises with outstanding performance for priority handling to support the production of consumer goods in heavy demand, as well as the processing of agricultural and sideline products and the production of small farm implements. In Haining County, in 1981 the agricultural banks and credit unions granted loans of 70 million yuan to commune-and brigade-operated textile industries and agricultural and sideline processing industries. These loans promoted the development of commune and brigade enterprises with a total production of 193 million yuan, 45 percent over 1980.

In order to help commune and brigade enterprises to increase economic benefits, many municipality and county bank branches stressed economic information activities by helping these enterprises to have timely access to changes in supply and demand. By tapping the advantageous conditions of wide-ranging connections of financial department, the banks in different localities open sales and purchase channels to help enterprises to handle inventory and production goods. Moreover, by using the means of settlement, the banks helped in promptly recovering receivables, thus speeding up capital circulation in enterprises.

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BRIEFS

LIVE HOG PROCUREMENT QUOTA FULFILLED--Up to 10 March 1982, Zhejiang Province has already procured 2.38 million head of live hogs, thus fulfilling early the first quarter of procurement quota. This is a 6.8 percent of increase during the same period in 1981. Since the beginning of 1982, government of all levels has strengthened the leadership in live hog production, focusing its policy on stabilizing commune- and brigade-run live hog production and the state's procurement task. [Excerpt] [Hangzhou ZHEJIANG RIBAO in Chinese 25 Mar 82 p 1]

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